Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1-31. (Cancelled)

32. (Currently Amended) A method for supporting establishment of a connection between a node of an inside address realm and a node of an outside address realm through an intermediate communication gateway having a limited number of available outside-realm gateway addresses for enabling outside-realm representation of inside-realm nodes, said method comprising the steps of:

identifying, ~~whenever possible,~~ based on ~~multiplexation information in the form of~~ predetermined connection information, further connection information that in combination with said predetermined connection information defines an outside-realm gateway state representation that has no counterpart in a predetermined set of existing gateway connection states, wherein said predetermined connection information includes at least one of network address information and port information of at least one of said inside-realm node and said outside-realm node and said further connection information includes an outside-realm gateway address; and

initiating establishment of said connection based on said outside-realm gateway state representation.

33. (Currently Amended) The method according to claim 32, further comprising the step of maintaining a ~~separate~~ list representation of said predetermined set of existing gateway connection states, and wherein said outside-realm gateway state representation is identified based on comparison with corresponding information of said gateway connection states represented in said list representation.

34. (Previously Presented) The method according to claim 32, wherein said predetermined connection information, for an inside-realm initiated connection, includes

at least one of outside node address information and outside node port information, said outside-realm gateway state representation is an at least partially complete gateway state representation, and said predetermined set of gateway connection states includes the existing gateway connection states in said gateway.

35. (Original) The method according to claim 34, wherein said further connection information also includes associated gateway port information, said outside-realm representation is a complete outside-realm representation, and said step of initiating establishment of said connection comprises the step of requesting that said gateway creates a gateway connection state based on said complete outside-realm representation.

36. (Original) The method according to claim 34, wherein said outside-realm representation is a partially complete outside-realm representation, and said step of initiating establishment of said connection comprises the step of requesting that said gateway creates a partially complete gateway connection state based on said partially complete outside-realm representation.

37. (Original) The method according to claim 36, further comprising the step of selecting, if said identification is not possible, an outside-realm gateway address among the least utilized outside-realm gateway addresses to define said partially complete outside-realm representation to be used for initiating establishment of said connection.

38. (Original) The method according to claim 37, further comprising the step of verifying, upon receipt of a packet from said inside node to said gateway, that said partially complete outside-realm representation in further combination with inside node port information associated with said packet, defines a complete outside-realm gateway state representation that has no counterpart in any existing gateway connection state.

39. (Original) The method according to claim 38, further comprising the step of transforming a partially complete gateway connection state created in said gateway based on said partially complete outside-realm representation into a complete gateway connection state based on said complete outside-realm representation, thereby completely establishing said connection.

40. (Previously Presented) The method according to claim 32, wherein said predetermined connection information, for an outside-realm initiated connection, includes at least one of outside node address information and inside node port information, said outside-realm gateway state representation is a partially complete gateway state representation and said predetermined set of gateway connection states includes the existing partially complete gateway connection states in said gateway.

41. (Original) The method according to claim 40, wherein said step of identifying further connection information including an outside-realm gateway address comprises the step of traversing outside-realm gateway addresses of the gateway until finding an outside-realm gateway address, which in combination with said predetermined connection information has no counterpart in any existing partially complete gateway connection state.

42. (Original) The method according to claim 40, wherein said step of identifying further connection information including an outside-realm gateway address comprises the step of verifying that a pre-allocated outside-realm gateway address in combination with said predetermined connection information has no counterpart in any existing partially complete gateway connection state.

43. (Original) The method according to claim 40, wherein said step of initiating establishment of said connection comprises the step of requesting that said gateway establishes a partially complete gateway connection state based on said partially complete outside-realm representation.

44. (Original) The method according to claim 43, further comprising the step of transforming, upon receipt of a packet from said outside node to said gateway, said partially complete gateway connection state that has been created in said gateway into a complete gateway connection state based on complementary connection information associated with said packet.

45. (Original) The method according to claim 44, wherein said predetermined connection information is predetermined outside node address information, and said complementary connection information includes inside node port information and outside node port information.

46. (Original) The method according to claim 44, wherein said predetermined connection information is predetermined inside node port information, and said complementary connection information includes outside node address information and outside node port information.

47. (Original) The method according to claim 40, further comprising the steps of:

selecting, if said identification is not possible based on predetermined inside node port information, another gateway port; and

identifying further connection information including an outside-realm gateway address based on said selected gateway port to define a unique, partially complete outside-realm representation of a gateway connection state.

48. (Original) The method according to claim 40, wherein said predetermined connection information originates from a user-resource identifier query initiated from said outside node.

49. (Currently Amended) A system for supporting establishment of a connection between a node of an inside address realm and a node of an outside

address realm through a communication gateway having a limited number of available outside-realm gateway addresses for enabling outside-realm representation of inside-realm nodes, said system comprising:

means for identifying, ~~whenever possible,~~ based on ~~multiplexation information in the form of~~ predetermined connection information, further connection information that in combination with said predetermined connection information defines an outside-realm gateway state representation that has no counterpart in a predetermined set of existing gateway connection states, wherein said predetermined connection information includes at least one of network address information and port information of at least one of said inside-realm node and said outside-realm node and said further connection information includes an outside-realm gateway address; and

means for initiating establishment of said connection based on said outside-realm gateway state representation.

50. (Currently Amended) The system according to claim 49, further comprising means for maintaining a ~~separate~~ list representation of said predetermined set of existing gateway connection states, and wherein said outside-realm gateway state representation is identified based on comparison with corresponding information of said gateway connection states represented in said list representation.

51. (Previously Presented) The system according to claim 49, wherein said predetermined connection information, for an inside-realm initiated connection, includes at least one of outside node address information and outside node port information, said outside-realm gateway state representation is an at least partially complete gateway state representation, and said predetermined set of gateway connection states includes the existing gateway connection states in said gateway.

52. (Original) The system according to claim 51, wherein said further connection information also includes associated gateway port information, said outside-realm representation is a complete outside-realm representation, and said means for initiating

establishment of said connection comprises means for requesting that said gateway creates a gateway connection state based on said complete outside-realm representation.

53. (Original) The system according to claim 51, wherein said outside-realm representation is a partially complete outside-realm representation, and said means for initiating establishment of said connection comprises means for requesting that said gateway creates a partially complete gateway connection state based on said partially complete outside-realm representation.

54. (Original) The system according to claim 53, further comprising means for selecting, if said identification is not possible, an outside-realm gateway address among the least utilized outside-realm gateway addresses to define said partially complete outside-realm representation to be used for initiating establishment of said connection.

55. (Original) The system according to claim 54, further comprising means for verifying, upon receipt of a packet from said inside node to said gateway, that said partially complete outside-realm representation in further combination with inside node port information associated with said packet, defines a complete outside-realm gateway state representation that has no counterpart in any existing gateway connection state.

56. (Original) The system according to claim 55, further comprising means for transforming a partially complete gateway connection state created in said gateway based on said partially complete outside-realm representation into a complete gateway connection state based on said complete outside-realm representation, thereby completely establishing said connection.

57. (Previously Presented) The system according to claim 49, wherein said predetermined connection information, for an outside-realm initiated connection, includes at least one of outside node address information and inside node port

information, said outside-realm gateway state representation is a partially complete gateway state representation and said predetermined set of gateway connection states includes the existing partially complete gateway connection states in said gateway.

58. (Original) The system according to claim 57, wherein said means for identifying further connection information including an outside-realm gateway address comprises means for traversing outside-realm gateway addresses of the gateway until finding an outside- realm gateway address, which in combination with said predetermined connection information has no counterpart in any existing partially complete gateway connection state.

59. (Original) The system according to claim 57, wherein said means for identifying further connection information including an outside-realm gateway address comprises means for verifying that a pre-allocated outside-realm gateway address in combination with said predetermined connection information has no counterpart in any existing partially complete gateway connection state.

60. (Original) The system according to claim 57, wherein said means for initiating establishment of said connection comprises means for requesting that said gateway establishes a partially complete gateway connection state based on said partially complete outside- realm representation.

61. (Original) The system according to claim 60, further comprising means for transforming, upon receipt of a packet from said outside node to said gateway, said partially complete gateway connection state that has been created in said gateway into a complete gateway connection state based on complementary connection information associated with said packet.

62. (Original) The system according to claim 61, wherein said predetermined connection information is predetermined outside node address information, and said

complementary connection information includes inside node port information and outside node port information.

63. (Original) The system according to claim 61, wherein said predetermined connection information is predetermined inside node port information, and said complementary connection information includes outside node address information and outside node port information.

64. (Original) The system according to claim 57, further comprising means for selecting, if said identification is not possible based on predetermined inside node port information, another gateway port, and wherein said identifying means is operable for identifying further connection information including an outside-realm gateway address based on said selected gateway port to define a unique, partially complete outside-realm representation of a gateway connection state.

65. (Previously Presented) The system according to claim 57, wherein said predetermined connection information originates from a user-resource identifier query initiated from said outside node.

66. (Previously Presented) The system according to claim 49, wherein said connection establishment is based on said outside-realm gateway state representation and a corresponding inside-realm gateway state representation.

67. (Previously Presented) The system according to claim 49, further comprising:

means, responsive to a user-resource identifier query from said outside node, for determining inside-realm network address information based on an inside node identifier included in said identifier query, wherein said identifier query further includes said predetermined connection information including at least one of outside node address information and inside node port information;

means for identifying, based on said predetermined connection information included in said identifier query, said outside-realm gateway address to be used in establishing a dynamic gateway connection state for a flow between said outside node and said inside node through said gateway;

means for establishing said dynamic gateway connection state based on said identified outside-realm gateway address, said predetermined connection information included in said identifier query and said inside-realm network address information, thereby enabling an outside-realm initiated connection.

68. (Previously Presented) The system according to claim 67, wherein said means for establishing said dynamic gateway connection state comprises:

means for creating a partially complete gateway connection state based on said identified outside-realm gateway address, said predetermined connection information included in said identifier query and said inside-realm network address information;

means for transforming, upon receipt of a packet from said outside node to said gateway, said partially complete gateway state into a complete gateway connection state based on complementary connection information associated with said packet.

69. (Previously Presented) The system according to claim 67, wherein said means for identifying an outside-realm gateway address is operable for identifying an outside-realm gateway address, which in combination with said predetermined connection information included in said identifier-query defines a partially complete outside-realm gateway state representation that has no counterpart in any existing partially complete gateway connection state.

70. (Previously Presented) The system according to claim 69, further comprising means for maintaining a separate list representation of existing partially complete gateway connection states, and wherein said partially complete outside-realm representation is identified based on comparison with corresponding information of all existing partially complete gateway connection states represented in said list representation.

71. (Previously Presented) The system according to claim 70, wherein said means for identifying an outside-realm gateway address comprises means for traversing outside-realm gateway addresses associated with said gateway until finding an outside-realm gateway address, which in combination with said predetermined connection information included in said identifier query has no counterpart in any existing partially complete gateway connection state represented in said list representation.

72. (Previously Presented) The system according to claim 70, wherein said means for identifying an outside-realm gateway address comprises means for verifying that a pre-allocated outside-realm gateway address in combination with said predetermined connection information included in said identifier query has no counterpart in any existing partially complete gateway connection state represented in said list representation.

73. (Previously Presented) The system according to claim 68, wherein said predetermined connection information included in said identifier query is an outside network address of said outside node, and said complementary connection information for completing the gateway connection state includes a port number of said inside node and a port number of said outside node.

74. (Previously Presented) The system according to claim 68, wherein said predetermined connection information included in said identifier query is an inside node port number, and said complementary connection information for completing the gateway connection state includes an outside network address of said outside node and a port number of said outside node.

75. (Previously Presented) The system according to claim 67, further comprising means for notifying said outside node of said identified outside-realm gateway address.

76. (Previously Presented) The system according to claim 67, wherein said means for identifying an outside-realm gateway address, among the outside-realm gateway addresses associated with said gateway, includes a gateway resource manager.

77. (Previously Presented) The system according to claim 67, wherein said user-resource identifier query is a Domain Name Server (DNS) query.

78. (Previously Presented) The system according to claim 67, wherein said inside address realm is a private address realm and said outside address realm is a public address realm.

79. (Currently Amended) A gateway resource manager for a communication gateway that has a limited number of available outside-realm gateway addresses for enabling outside-realm representation of inside-realm nodes, said gateway resource manager comprising:

- means for receiving ~~multiplexation information in the form of~~ predetermined connection information;
- means for identifying, ~~whenever possible,~~ based on said predetermined connection information, further connection information that in combination with said predetermined connection information defines an outside-realm gateway state representation that has no counterpart in a predetermined set of existing gateway connection states, wherein said predetermined connection information includes at least one of network address information and port information of at least one of said inside-realm node and said outside-realm node and said further connection information includes an outside-realm gateway address; and

means for initiating establishment of a connection based on said outside-realm gateway state representation.

80. (Previously Presented) The gateway resource manager according to claim 79, wherein said receiving means is operable for receiving inside-realm network address

information corresponding to an inside node, and predetermined connection information including at least one of address information of an outside node and inside node port information;

said outside-realm gateway address is to be used in establishing a dynamic gateway connection state for a flow between said outside node and said inside node through said gateway;

said means for initiating establishment of a connection comprises means for requesting said gateway to establish said dynamic gateway connection state based on said identified outside-realm gateway address, said predetermined connection information and said inside-realm network address information.

81. (Previously Presented) The gateway resource manager according to claim 80, wherein said predetermined connection information is an outside node address, and said requesting means is operable for requesting allocation of said identified outside-realm gateway address to said inside node for traffic coming from said outside node address.

82. (Previously Presented) The gateway resource manager according to claim 80, wherein said requesting means is operable for sending a request to said gateway for establishment of a partially complete gateway connection state based on said identified outside-realm gateway address, said predetermined connection information and said inside-realm network address information.

83. (Previously Presented) The gateway resource manager according to claim 82, further comprising:

- means for receiving a reply from said gateway that said partially complete gateway connection state has been created; and
- means for notifying said outside node of said identified outside-realm gateway address in response to said reply from said gateway.

84. (Previously Presented) The gateway resource manager according to claim 82, wherein said means for identifying an outside-realm gateway address is operable for identifying an outside-realm gateway address, which in combination with said predetermined information defines a partially complete outside-realm gateway state representation that has no counterpart in any existing partially complete gateway connection state.

85. (Previously Presented) The gateway resource manager according to claim 84, further comprising means for maintaining a list representation of existing partially complete gateway connection states, and wherein said partially complete outside-realm representation is identified based on comparison with corresponding information of all existing partially complete gateway connection states represented in said list representation.

86. (Previously Presented) The method according to claim 32, wherein said connection establishment is based on said outside-realm gateway state representation and a corresponding inside-realm gateway state representation.

87. (Previously Presented) The method according to claim 32, further comprising the steps of:

preparing, at said outside node, a user-resource identifier query that includes an inside node identifier as well as said predetermined connection information including at least one of outside node address information and inside node port information;

determining inside-realm network address information based on said inside node identifier included in said identifier query;

identifying, based on said predetermined connection information included in said identifier query, said outside-realm gateway address to be used in establishing a dynamic gateway connection state for a flow between said outside node and said inside node through said gateway; and

establishing said dynamic gateway connection state based on said identified outside-realm gateway address, said predetermined connection information included in said identifier query and said inside-realm network address information, thereby enabling an outside-realm initiated connection.

88. (Previously Presented) The method according to claim 87, wherein said step of establishing said dynamic gateway connection state comprises the steps of:

creating a partially complete gateway connection state based on said identified outside-realm gateway address, said predetermined connection information included in said identifier query and said inside-realm network address information; and

upon receipt of a packet from said outside node to said gateway, transforming said partially complete gateway state into a complete gateway connection state based on complementary connection information associated with said packet.

89. (Previously Presented) The method according to claim 87, wherein said step of identifying an outside-realm gateway address comprises the step of identifying an outside-realm gateway address, which in combination with said predetermined information included in said identifier-query defines a partially complete outside-realm gateway state representation that has no counterpart in any existing partially complete gateway connection state.

90. (Previously Presented) The method according to claim 89, further comprising the step of maintaining a separate list representation of existing partially complete gateway connection states, and wherein said partially complete outside-realm representation is identified based on comparison with corresponding information of all existing partially complete gateway connection states represented in said list representation.

91. (Previously Presented) The method according to claim 90, wherein said step of identifying an outside-realm gateway address comprises the step of traversing outside-realm gateway addresses associated with said gateway until finding an outside-realm

gateway address, which in combination with said predetermined connection information included in said identifier query has no counterpart in any existing partially complete gateway connection state represented in said list representation.

92. (Previously Presented) The method according to claim 90, wherein said step of identifying an outside-realm gateway address comprises the step of verifying that a pre-allocated outside-realm gateway address in combination with said predetermined connection information included in said identifier query has no counterpart in any existing partially complete gateway connection state represented in said list representation.

93. (Previously Presented) The method according to claim 88, wherein said predetermined connection information included in said identifier query is an outside network address of said outside node, and said complementary connection information for completing the gateway connection state includes a port number of said inside node and a port number of said outside node.

94. (Previously Presented) The method according to claim 88, wherein said predetermined connection information included in said identifier query is an inside node port number, and said complementary connection information for completing the gateway connection state includes an outside network address of said outside node and a port number of said outside node.

95. (Previously Presented) The method according to claim 87, further comprising the step of notifying said outside node of said identified outside-realm gateway address.

96. (Previously Presented) The method according to claim 87, wherein said user-resource identifier query is a Domain Name Server (DNS) query.

97. (Previously Presented) The method according to claim 87, wherein said inside address realm is a private address realm and said outside address realm is a public address realm.

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